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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Marc Pignot et al.
Serial No. : 09/744,641
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Title : NEW COFACTORS FOR METHYLTRANSFERASES

Art Unit : 1645
Examiner : Josephine Young

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132

Sir:

1. I, Elmar Weinhold, am a co-inventor with Marc Pignot, on the above-identified patent application.

2. I am an expert in the field of synthetic chemistry and was an expert at the time of the invention. At the time of the invention I was employed as a group leader at Max-Planck-Gesellschaft zur Foerderung der Wissenschaften, assignee of the above-referenced patent application. Presently I'm Professor of Organic Chemistry at the RWTH Aachen (Rheinisch-Westfälische Technische Hochschule; Technical University of Aachen). My resume is attached as documentation of my credentials.

3. I declare that one skilled in the art at the time of the invention using the teaching of the specification, including the exemplary protocols as set forth in Examples 1 and 2, pages 19 to 30 of specification, and variations thereof, and other protocols known in the art at the time of the invention, could have successfully made and used the claimed compounds using only routine screening of alternatives. In particular, one skilled in the art using the teaching of the specification and routine methods known in the art at the time of the invention could have

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Jeanne Brown Rice
Signature

Jeanne Brown Rice
Typed or Printed Name of Person Signing Certificate

designed synthetic schemes to synthesize any member of the claimed genus of aziridine derivatives using only routine screening of alternatives.

4. I declare that one skilled in the art could have used routine protocols known in the art at the time of the invention, including those described in the instant specification, to determine if any synthesized specie could act as a co-factor for a SAM-dependent methyltransferase. In other words, it would have taken only routine screening to determine if an aziridine derivative of the invention could act as a co-factor for a SAM-dependent methyltransferase.

One skilled in the art could have used routine protocols known in the art at the time of the invention, including those described in the instant specification, to determine if a putative methyltransferase could have complexed with an aziridine derivative of the present invention. In other words, it would have taken only routine screening to determine if a methyltransferase could have complexed with an aziridine derivative of the present invention.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted

Date: 07/24/03

Elmar Weinhold

CURRICULUM VITAE

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Date of Birth: July 13, 1960

Place of Birth: Berlin, Germany

Positions/Education:

since 06.00 **Professor of Organic Chemistry** at the Institut für Organische Chemie der RWTH Aachen, Germany.

07.93 – 05.00 **Group leader** at the Department of Physical Biochemistry (*Prof. Roger Goody*), Max-Planck-Institut für molekulare Physiologie, Dortmund, Germany.
Habilitation in bloorganic chemistry at the Fachbereich Chemie, Universität Dortmund, Germany, with the title: Synthesis of modified duplex oligodeoxynucleotides and cofactor analogues for structure-function studies of DNA methyltransferases.

03.93 – 05.93 **Visiting scientist** at the New England Biolabs, Inc., Beverly, MA, USA.

03.91 – 02.93	**Postdoc** at the Department of Chemistry, Harvard University, Cambridge, MA, USA. Postdoctoral fellow of the Deutsche Forschungsgemeinschaft in the laboratory of *Prof. Jeremy R. Knowles* with the project title: Binding studies of synthestic sialic acid derivatives and influenza A hemagglutinin
07.86 – 02.91	**Ph.D.** at the Laboratorium für Organische Chemie der ETH-Zurich, Switzerland. Ph.D. thesis in the group of *Prof. Steven Benner* with the title: Protein engineering: A method for understanding the relationship between structure and activity of alcohol dehydrogenase from yeast.
02.86 – 06.86	**Graduate Student** at the Department of Chemistry, Harvard University, Cambridge, MA, USA.
03.80 – 01.86	**Diploma in Chemistry** (very good) at the Freie Universität Berlin, Germany. Diploma thesis with *Prof. Johann Mulzer* in the field of asymmetric synthesis.

Peer-reviewed publications

26. A. David, N. Bleimling, C. Beuck, J.-M. Lehn, E. Weinhold, M.-P. Teulade-Fichou, "DNA mismatch-specific base flipping by a bisacridine macrocycle", *ChemBioChem*, submitted.
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3. G. Pljevaljcic, F. Schmidt, A. Peschlow, E. Weinhold, "Sequence-specific DNA labeling using methyltransferases" in *Methods in Molecular Biology: Bioconjugation Protocols* (Ed.: C. M. Niemeyer), Humana Press, NY, in press.

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